IN THE CLAIMS:

Please amend claim 19 as follows:

1. (Original): An apparatus for controlling resistivity of ultra pure water, comprising:

a housing to house a gas permeable membrane, the gas permeable membrane dividing the interior of the housing into an ultra pure water path and a mixed gas path wherein a mixed gas, selected from the group consisting of a mixed gas comprising carbon dioxide and a gas having a lower resistivity controlling ability than carbon dioxide and a mixed gas comprising ammonia and a gas having a lower resistivity controlling ability than ammonia, passes the mixed gas path, and the housing has an opening for supplying the mixed gas through which the mixed gas path communicates with the exterior of the housing;

an inlet for untreated ultra pure water which communicates with the ultra pure water path; and

an outlet for resistivity-controlled ultra pure water which communicates with the ultra pure water path, wherein

the gas permeable membrane is capable of supplying carbon dioxide or ammonia to the untreated ultra pure water which passes through the ultra pure water path at a concentration equal to or more than 90% of the equilibrium concentration.

2. (Original): An apparatus for controlling resistivity of ultra pure water, comprising:

a membrane module having a gas permeable membrane, the membrane module being capable of supplying carbon dioxide or ammonia to untreated ultra pure water so that the concentration of carbon dioxide or ammonia in the ultra pure water becomes equal to or more than 90% of the equilibrium concentration within an expected fluctuation range of the flow rate of the untreated ultra pure water, and

a unit which produces ultra pure water in which carbon dioxide gas or ammonia has been dissolved in a sufficient amount to obtain a desired resistivity at any flow rate of the ultra pure water supplied, by contacting the ultra pure water with a mixed gas, selected from the group consisting of a mixed gas comprising carbon dioxide and a gas having a lower resistivity controlling ability than carbon dioxide and a mixed gas comprising ammonia and a gas having a lower resistivity controlling ability than ammonia, via the gas permeable membrane.

3. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 2, further comprising:

a housing to house the membrane module having the gas permeable membrane; and

a valve for maintaining a constant pressure of the mixed gas.

4. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 3, wherein

the membrane module, which is capable of producing ultra pure water in which carbon

dioxide or ammonia is dissolved, is a hollow-fiber membrane module.

5. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 4, wherein

the hollow-fiber membrane module is of an internal water-flow type comprising a housing and a bundle of a plurality of hollow fiber membranes housed in the housing, in which the mixed gas is injected into a space between the exterior of the hollow-fiber membranes and the housing, and in which the ultra pure water flows inside the hollow-fiber membranes.

6. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 4, wherein

the hollow-fiber membrane module is of an external water-flow type comprising a housing and a bundle of a plurality of hollow fiber membranes housed in the housing, in which the mixed gas is injected inside the hollow fiber membranes, and in which the ultra pure water flows in a space between the exterior of the hollow-fiber membranes and the housing.

7. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 5, further comprising a device which maintains a constant flow rate of the mixed gas.

8. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 6, further comprising a device which maintains a constant flow rate of the mixed gas.

9. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 5, further comprising a device which produces the mixed gas.

10. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 6, further comprising a device which produces the mixed gas.

11. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 5, wherein the mixed gas is air.

12. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 6, wherein the mixed gas is air.

13. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 7, wherein the mixed gas is air.

14. (Original): An apparatus for controlling resistivity of ultra pure water according to Claim 8, wherein the mixed gas is air.

15. (Original): A method for controlling resistivity of ultra pure water, comprising the steps of:

supplying a mixed gas, selected from the group consisting of a mixed gas comprising carbon dioxide and a gas having a lower resistivity controlling ability than carbon dioxide and a mixed gas comprising ammonia and a gas having a lower resistivity controlling ability than ammonia, to a flow of ultra pure water via a gas permeable membrane; and

producing resistivity-controlled ultra pure water by dissolving carbon dioxide or ammonia in the ultra pure water to a concentration equal to or more than 90% of the equilibrium concentration which is determined by the concentration of carbon dioxide or ammonia in the mixed gas, the partial pressure of carbon dioxide or ammonia in the mixed gas, and the temperature of the ultra pure water.

16. (Original): A method for controlling resistivity of ultra pure water, comprising the step of:

contacting ultra pure water with a mixed gas, selected from the group consisting of a mixed gas comprising carbon dioxide and a gas having a lower resistivity controlling ability than carbon dioxide and a mixed gas comprising ammonia and a gas having a lower resistivity controlling ability than ammonia, via a membrane module having a gas permeable membrane, the membrane module being capable of supplying carbon dioxide or ammonia to the ultra pure water so that the concentration of carbon dioxide or ammonia in the ultra pure water becomes equal to or more than 90% of the equilibrium concentration within an expected fluctuation range of the flow rate of the

untreated ultra pure water, whereby resistivity-controlled ultra pure water is produced in which carbon dioxide gas or ammonia has been dissolved in a sufficient amount to obtain a desired resistivity at any flow rate of the ultra pure water supplied.

17. (Original): A method for controlling resistivity of ultra pure water according to Claim 15, wherein air is used as the mixed gas.

18. (Original): A method for controlling resistivity of ultra pure water according to Claim 16, wherein air is used as the mixed gas.

19. (Currently presented): A method for controlling resistivity of ultra pure water, comprising:

~~using~~ flowing water to the membrane module of the apparatus for controlling resistivity of ultra pure water according to Claim 2.